CW/HW#76: Scale Drawings

Geometry

Due: Thursday, February 4th

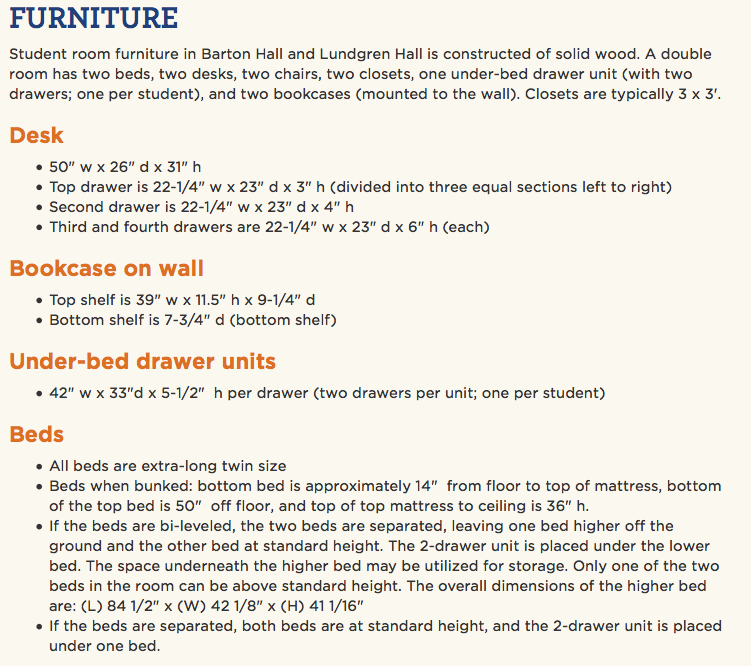
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PD: \_\_\_\_\_\_\_\_\_

You will be able to determine scale factor and apply scale factor to solve for unknowns.

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| 1. A map has a scale of 2 cm equal to 75 miles. If two cities are 11 cm apart on the map, how far apart are they in miles?  What is the scale factor? (Include units) |
| 2. The floor plan of a house was drawn using a scale of 3 cm: 4 ½ m. Find the actual length of the living room if it is 5 cm on the drawing.  What is the scale factor? (Include units) |
| 3. On a map, ½ cm equals 65 km. If China and New Sweden are 4.5 cm apart on the map how far apart are they really?  What is the scale factor? (Include units) |
| 4. The floor plan of a house is drawn using a scale of in = 8 ft. What is the length of the basement if it is 2.5 inches long on the floor plan?  What is the scale factor? (Include units) |
| 5. On the blueprints of a house, the master bedroom has dimensions 4 in by 5 ½ inches. If the scale of the prints is ¾ in = 3 ft, what are the actual dimensions of the master bedroom?  What is the scale factor? (Include units) |

You will be able to create a scale drawing.

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| 6. You are going to be a freshman at University of Illinois. YAY! Your dorm room is in Barton Hall and you have a double. The room is below.  a) Use your ruler to determine the scale factor of this image. (HINT: convert feet to inches)  b) Using the scale factor you determined add your furniture to the room! Design the lay out of the room with your partner. You are roommates! (The furniture is listed on the next page)   |  |  |  |  | | --- | --- | --- | --- | | Item | Original Dimensions (only L & W) | Scale factor  (Should not change) | Scaled Dimensions | | Desk |  |  |  | | Bookcase  (Top shelf) |  |  |  | | Bed |  |  |  | | Bean bag chair | 48” x 48” |  |  | |
| Macintosh HD:Users:rmitrovich:Downloads:barton-lundgren-double1.pdf |
| c) Will the bean bag chair fit? Explain. |



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| 7. You are planning a road trip to visit your friends from geometry at their colleges. (map on the next page)   |  |  |  |  | | --- | --- | --- | --- | | Travel | Distance (inches or cm) | Scale factor  (Include units) | Distance (Miles) | | UIC (Chicago, IL) to Illinois State (Bloomington/ Normal, IL) |  |  |  | | Illinois State to University of Illinois (Champaign, IL) |  |  |  | | University of Illinois (Champaign, IL) to Southern Illinois University (Carbondale, IL) |  |  |  | | Southern Illinois University to St. Louis University |  |  |  | | St. Louis University to Notre Dame (South Bend, IN) |  |  |  | |
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| Determine the scale factor here: |
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| Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2016-01-31 at 6.08.35 PM.png |
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